

## ABSTRACT

Disclosed is a method of producing a polyester fire-retardant core matrix for a prefabricated panel. The method 5 includes adding a fire-retardant agent to a polyester floss to allow the fire-retardant agent to permeate into the polyester floss, rolling the polyester floss, drenched by the fire-retardant agent, using a roller to promote permeation of the fire-retardant agent into the polyester 10 floss, drawing the excess fire-retardant agent from the polyester floss using a perforated roller, of which an air suction force is easily controlled, drying the semi-dried polyester floss using a microwave generating unit, and foaming the dried polyester floss using a heater. The 15 polyester fire-retardant core matrix has advantages of excellent fire-retardancy, high strength, and low absorptivity.